

# **LAND SUITABILITY MAP**

## **NATURAL RUBBER**

### **LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS**

### **CITY OF ISABELA**



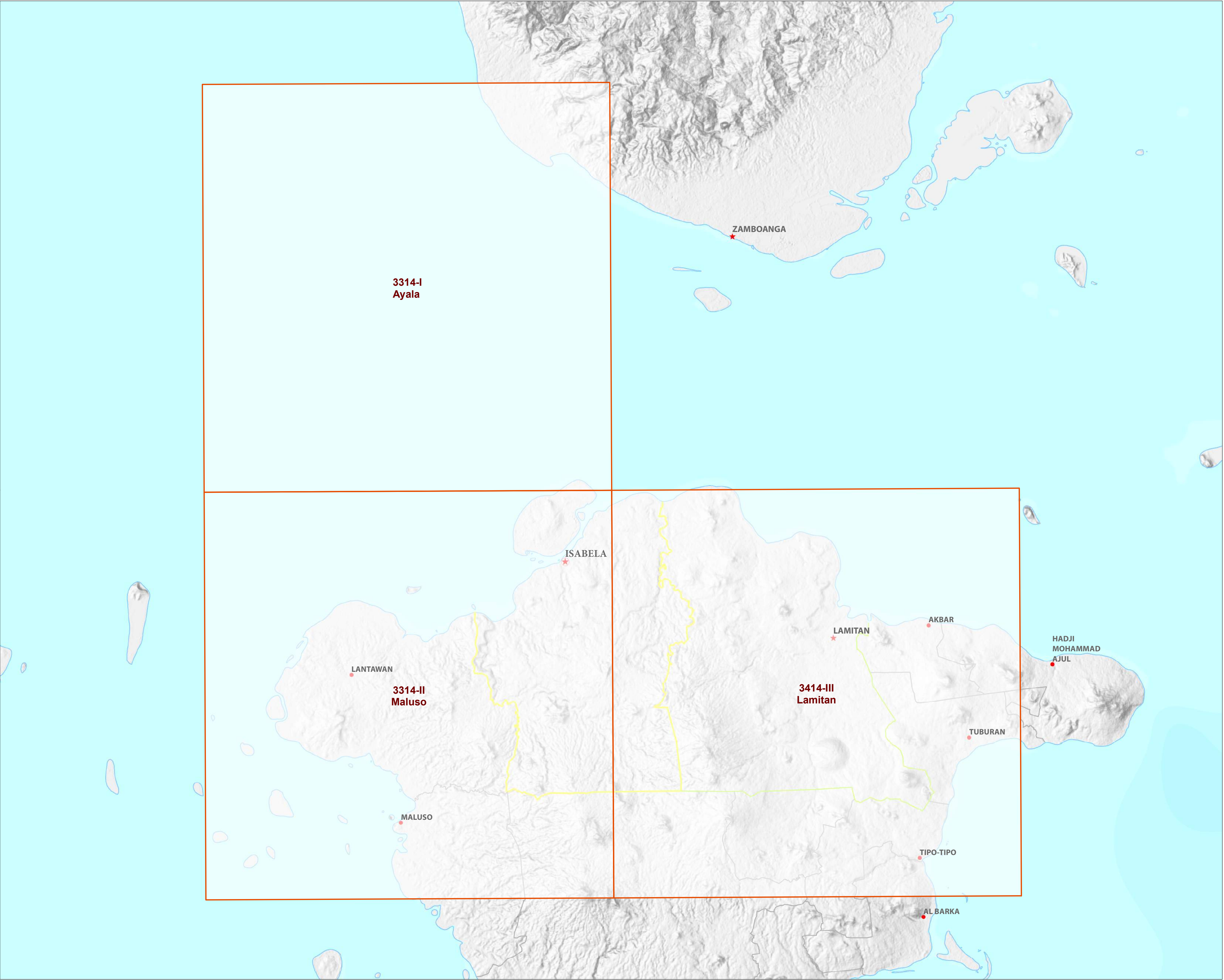
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**DEPARTMENT OF AGRICULTURE**  
**BUREAU OF SOILS AND WATER MANAGEMENT**

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# MAP INDEX

## LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS CITY OF ISABELA



**LEGEND**

**Places**

- ★ Capital City
- ★ City
- Capital Town
- Town

**Administrative Boundary**

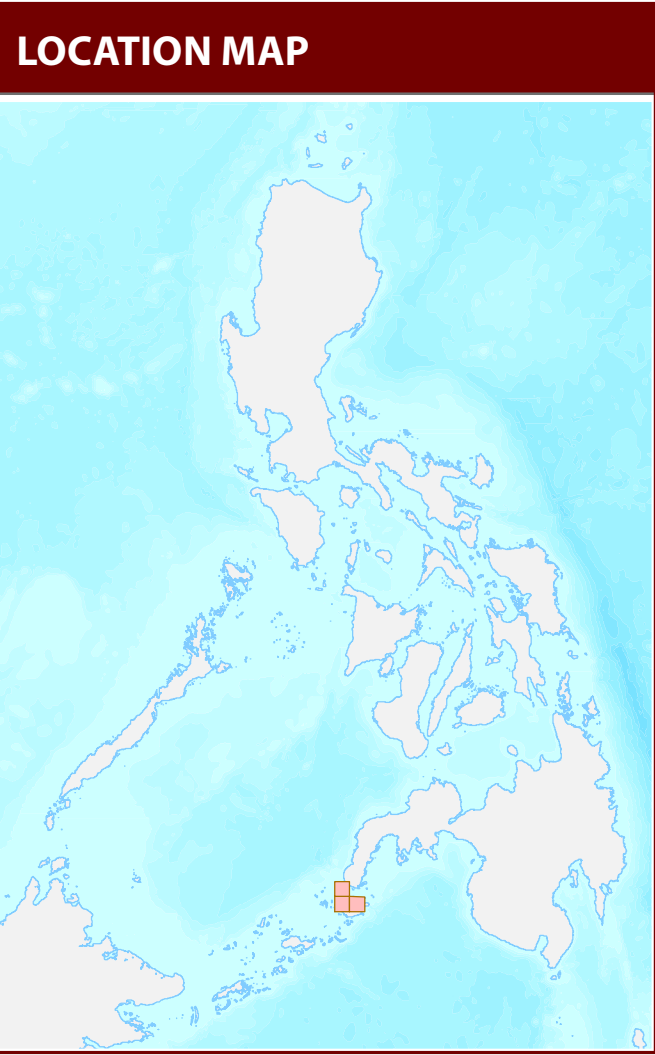
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**Topographic Relief**

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**MISCELLANEOUS INFORMATION**

Land suitability information produced by the Bureau of Soils and Water Management (BSWM) through the **Land Resources Evaluation and Suitability Assessment of Strategic Production Areas for Major Commodities Project** duly supported by the Philippine Council on Agriculture and Fisheries (PCA-F) and funded by the Bureau of Agricultural Research (BAR).

Map produced by the Geomatics and Soil Information Technology Division, Bureau of Soils and Water Management (BSWM).

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# LAND SUITABILITY MAP FOR RUBBER

## LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS CITY OF ISABELA, REGION IX

### EXTENT OF SUITABILITY FOR RUBBER PRODUCTION BY MUNICIPALITY

MUNICIPALITY	EXISTING RUBBER (Ha)			TOTAL EXISTING AREA (Ha)	EXPANSION AREA (Ha)						CONFLICT RESOLUTION AREA (Ha)						TOTAL POTENTIAL EXPANSION AREA (Ha)
					Coconut		Shrubland, unmanaged*		Grassland, unmanaged*		Corn		Paddy rice, non-irrigated		Other crops		
	S1	S2	S3		S1	S2	S1	S2	S1	S2	S1	S2	S1	S2			
CITY OF ISABELA	770	1,316	173	2,259	2,885	9,501	1	218	-	-	-	-	-	-	-	-	12,604
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	770	1,316	173	2,259	2,885	9,501	1	218	-	-	-	-	-	-	-	-	12,604

Note: Delivery of rubber planting materials must be started on the onset of rainy season.  
\*establishment of shade trees prior to planting of rubber.

### SUITABILITY CLASSES:

<div></div> <b>Highly Suitable (S1)</b> Land having no significant limitation to sustained application of a given use, or only minor limitations that will not significantly reduce productivity or benefits and will not raise inputs above an acceptable level.	<div></div> <b>Marginally Suitable (S3)</b> Land having limitations which in aggregate are severe for sustained application of a given use and will so reduce productivity or benefits, or increase required inputs, that this expenditure will be only marginally justified.
<div></div> <b>Moderately Suitable (S2)</b> Land having limitation which in aggregate are moderately severe for sustained application of a given use; the limitation will reduce productivity or benefits and increase required inputs to the extent that the overall advantage to be gained from the use, although still attractive, will be appreciably inferior to that expected on class S1 land.	<div></div> <b>Not Suitable / Not Relevant</b> Land having limitations which may be surmountable in time but which cannot be corrected with existing knowledge at currently acceptable cost; the limitations are so severe as to preclude successful sustained use of the land in the given manner. Existing forest, shrubland greater than 18% slope, irrigated paddy rice and miscellaneous land types such as built up areas, roads, etc are considered as not relevant.

### AGRONOMIC REQUIREMENT OF RUBBER PRODUCTION

LAND UTILIZATION TYPE	SUITABILITY RATING	SLOPE (%)	SOIL DEPTH (cm)	SOIL TEXTURE	SOIL DRAINAGE	SOIL REACTION (pH)	INHERENT FERTILITY	FLOODING CLASS	EROSION CLASS	ROCK OUTCROPS	ELEVATION (masl)	ANNUAL RAINFALL (mm)	CLIMATIC TYPE
Rubber Tree	S1	<8	>100	CL, SiCL, SCL, SC, SiC, C, HC	WD,MWD,SPD	5.6 -7.2	high	none-slight	none-slight	none-few	<500	1000-2000	III, IV
	S2	8 - 30	30 - 100	FSL, L, SiL, SL	PD,VPD	4.5 - 5.5 7.3 - 7.8	medium	moderate	moderate	common	500-1000	2001-4500	I, II, III
	S3	>30	<30	S, LS, CSL	ED	<4.5 - > 7.9	low	severe	severe	many	>1000	<1000 >4500	

<b>SLOPE (%)</b> 0 - 3 - level to gently sloping 3 - 8 - gently sloping to undulating 8 - 18 - undulating to rolling 18 - 30 - rolling to moderately steep 30 - 50 - steep > 50 - very steep	<b>SOIL DRAINAGE</b> ED - excessively drained WD - well drained MWD - moderately well drained SPD - somewhat poorly drained PD - poorly drained VPD - very poorly drained	<b>SOIL REACTION (pH)</b> < 4.5 - extremely acid 4.5 - 5.0 - very strongly acid 5.1 - 5.5 - strongly acid 5.6 - 6.0 - medium acid 6.1 - 6.5 - slightly acid 6.6 - 7.2 - neutral 7.3 - 7.8 - mildly alkaline 7.9 - 8.4 - moderately alkaline > 8.5 - strongly alkaline	<b>SOIL TEXTURE</b> <b>Coarse</b> S - sand LS - loamy sand CSL - coarse sandy loam SL - sandy loam <b>Medium</b> FSL - fine sandy loam L - loam SIL - silt loam CL - clay loam SiCL - silty clay loam SCL - sandy clay loam	<b>Fine</b> SC - sandy clay SiC - silty clay C - clay HC - heavy clay
<b>SOIL DEPTH (cm)</b> 0 - 30 - very shallow 30 - 50 - shallow 50 - 100 - moderately deep > 100 - deep to very deep	<b>SURFACE IMPEDIMENT</b> ROCK OUTCROPS < 10% - none - few 10 - 30% - common > 30% - many			

### LAND LIMITATIONS DESCRIPTION AND COMBINATIONS

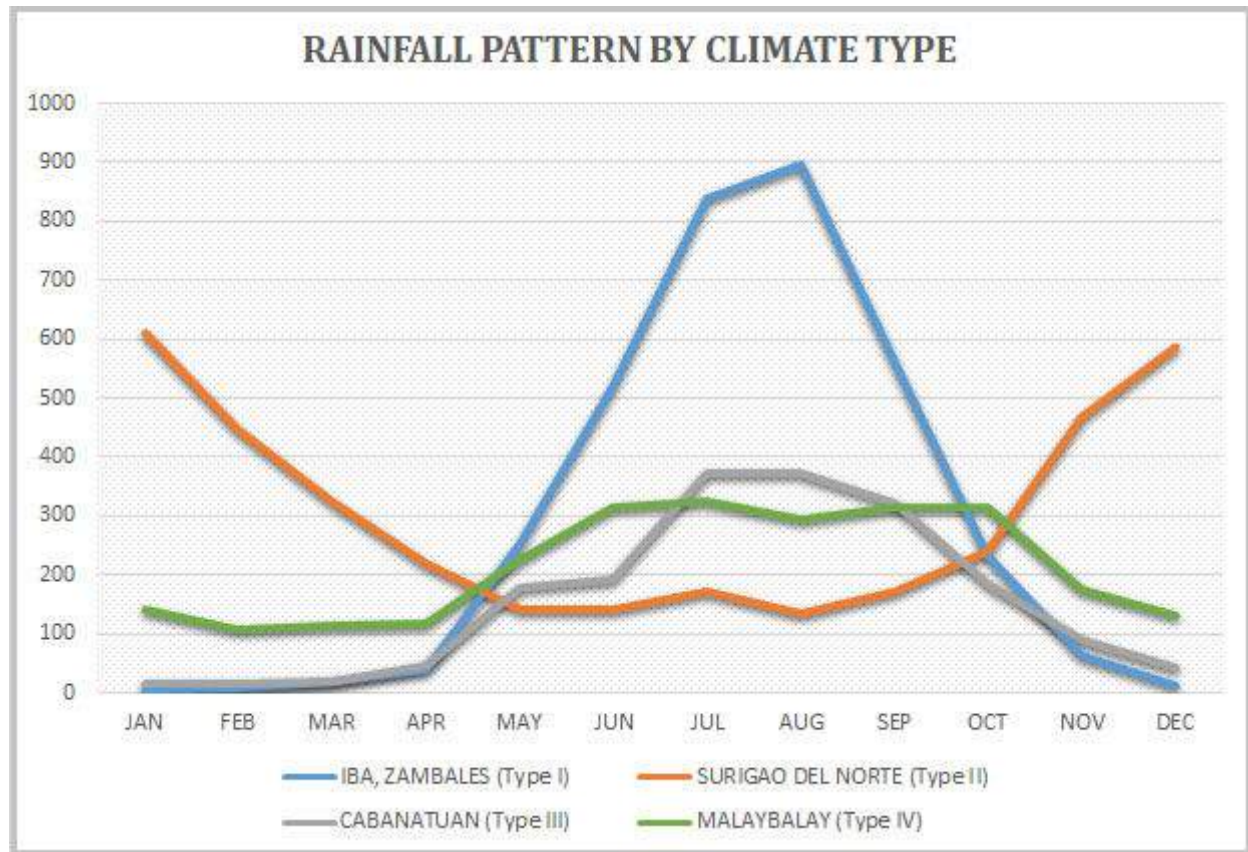
<b>ELEVATION</b> EI2 - 500 - 1000m or 2000 - 2500m EI3 - < 500m or > 2500m	<b>SOIL DRAINAGE</b> D2 - Somewhat poorly drained to poorly drained D3 - Very poorly drained or excessively drained	<b>SOIL DEPTH</b> Sh2 - Shallow to moderately deep (30 - 100cm) Sh3 - Very shallow (< 30cm)	<b>SOIL EROSION</b> E2 - Moderate erosion E3 - Severe erosion
<b>SLOPE/TOPOGRAPHY</b> T2 - Undulating to moderately steep T3 - Steep to very steep	<b>SOIL TEXTURE</b> Tc - Coarse texture	<b>ROCK OUTCROPS</b> Rc2 - Common Rc3 - Many	<b>FLOODING</b> F2 - Moderate seasonal flooding F3 - Severe seasonal flooding

CODE	LIMITATION	CODE	LIMITATION	CODE	LANDUSE
1	EI2	11	T2-EI2-E3-Sh2-Rc3	85	Mango
2	F2-D2	12	T2-EI2-Sh2-Rc2	116	Coconut
3	F2-Tc	13	T2-F2-D2	134	Shrubs, unmanaged
4	F3-D2	14	T2-F3-D2	137	Rubber
5	Sh2-Rc2	15	T3-E3		
6	T2	16	T3-E3-Sh3-Rc3		
7	T2-E2-Sh2-Rc2	17	T3-EI2-E3-Sh3-Rc2		
8	T2-E3	18	T3-EI2-E3-Sh3-Rc3		
9	T2-E3-Sh2-Rc3	19	T3-E3-Sh3-Rc3		
10	T2-EI2-E3-Sh2-Rc2	20	T3-EI2-E3-Sh3-Rc3		

### CLIMATE TYPE

<b>TYPE I</b> : Two pronounced season, dry from November to April and wet during the rest of the year. Maximum rain period is from June to September	<b>TYPE II</b> : No dry season with a very pronounced maximum rain period from December to February. There is not a single dry month. Maximum monthly rainfall occurs during the period from March to May.
<b>TYPE III</b> : No very pronounced maximum rain period, with a dry season lasting only from one to three months, either during the period from December to February or from March to May. This type resembles Type I since it has a short dry season.	<b>TYPE IV</b> : Rainfall is more or less evenly distributed throughout the year. This type resembles Type II since it has no dry season.

Whole part of City of Isabela is classified as climatic Type IV.



Source: PAGASA 2018, *Climatological Normals (Rainfall)*, Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA), accessed 27 July 2018, <<https://www1.pagasa.dost.gov.ph/index.php/climate/climatological-normals>>.



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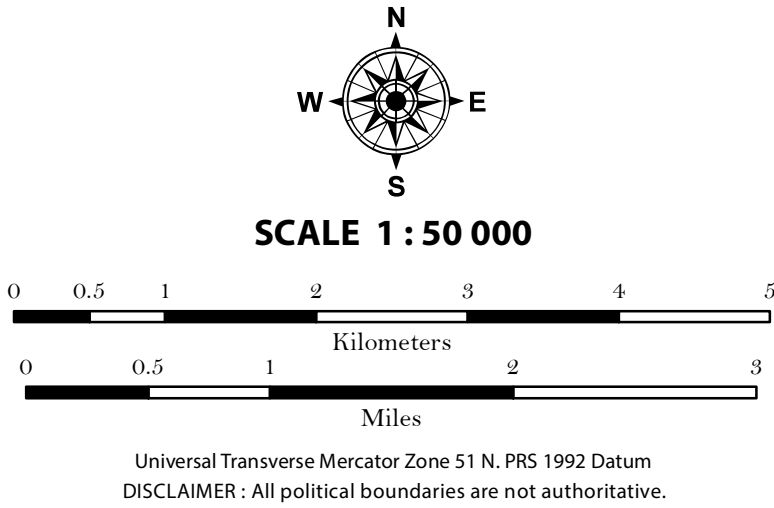
CITY OF ISABELA

Ayala



LAND SUITABILITY MAP  
RUBBER

LAND RESOURCES EVALUATION AND SUITABILITY  
ASSESSMENT OF STRATEGIC PRODUCTION AREAS



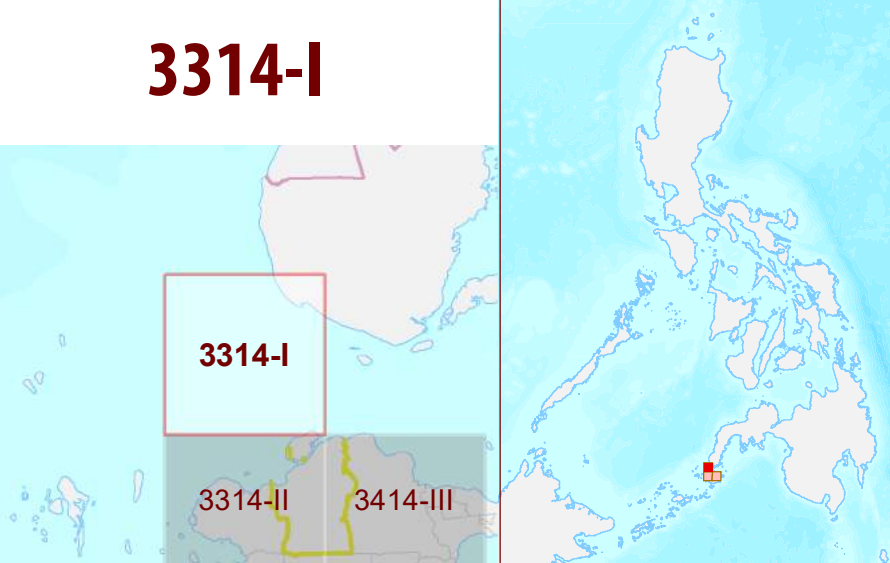
LEGEND

SUITABILITY CLASSES	
S1	<b>Highly Suitable</b> - Land having no significant limitations to sustained application of a given use, or only minor limitations that will not significantly reduce productivity or benefits and will not raise inputs above an acceptable level.
S2	<b>Moderately Suitable</b> - Land having limitations which in aggregate are moderately severe for sustained application of a given use; the limitations will reduce productivity or benefits and increase required inputs to the extent that the overall advantage to be gained from the use, although still attractive, will be appreciably inferior to that expected on class S1 land.
S3	<b>Marginally Suitable</b> - Land having limitations which in aggregate are severe for sustained application of a given use and will so reduce productivity or benefits, or increase required inputs, that this expenditure will be only marginally justified.
	<b>Not Suitable/ Not Relevant</b>
OTHER SIGNS	
NGP Areas	Land limitation
Cacao	Land use

CONVENTIONAL SIGNS

ROADS	BOUNDARY	HYDROLOGY
Expressway	Region	Sea / Shoreline
Trunk line	Province	Lakes / Rivers
Primary	District	PLACES
Secondary	Municipality	Capital City / City
Tertiary	Barangay	Capital Town / Town
LAND USE		
Built-up	Fishpond	Mangrove

ADJOINING SHEETS



MISCELLANEOUS INFORMATION

**SOURCES OF INFORMATION** : Topographic information taken from NAMRIA Topographic Map at 1:50,000 scale. Land resources information from the Agricultural Land Management and Evaluation Division (ALMED), Soils Survey Division (SSD) and Laboratory Services Division (LSD) of BSWM. Rice areas obtained from the Land Use System (FAO, 2015) and Philippine Rice Information System (PRISM) (IRRI, 2015). Data analysis and compilation through the **Land Resources Evaluation and Suitability Assessment of Strategic Production Areas for Major Commodities Project** implemented by BSWM (2017).

Project Leader : BERNARDO B. PASCUA  
GIS and Cartography : IRVIN K. SAMALCA

Funding Agency : Department of Agriculture - Bureau of Agricultural Research (DA-BAR)  
Collaborating Agencies : Philippine Council on Agriculture and Fisheries (PCAF)  
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: Local Government Unit (LGU) of covered provinces and municipalities

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LAND SUITABILITY MAP  
RUBBER

LAND RESOURCES EVALUATION AND SUITABILITY  
ASSESSMENT OF STRATEGIC PRODUCTION AREAS

SCALE 1 : 50 000

Universal Transverse Mercator Zone 51 N, PRS 1992 Datum  
DISCLAIMER : All political boundaries are not authoritative.

LEGEND

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S3

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Not Suitable/ Not Relevant

OTHER SIGNS

NGP Areas

Cacao

Land limitation

Land use

CONVENTIONAL SIGNS

ROADS

Expressway

Trunk line

Primary

Secondary

Tertiary

BOUNDARY

Region

Province

District

Municipality

Barangay

HYDROLOGY

Sea / Shoreline

Lakes / Rivers

PLACES

Capital City / City

Capital Town / Town

LAND USE

Built-up

Fishpond

Mangrove

ADJOINING SHEETS

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3314-I

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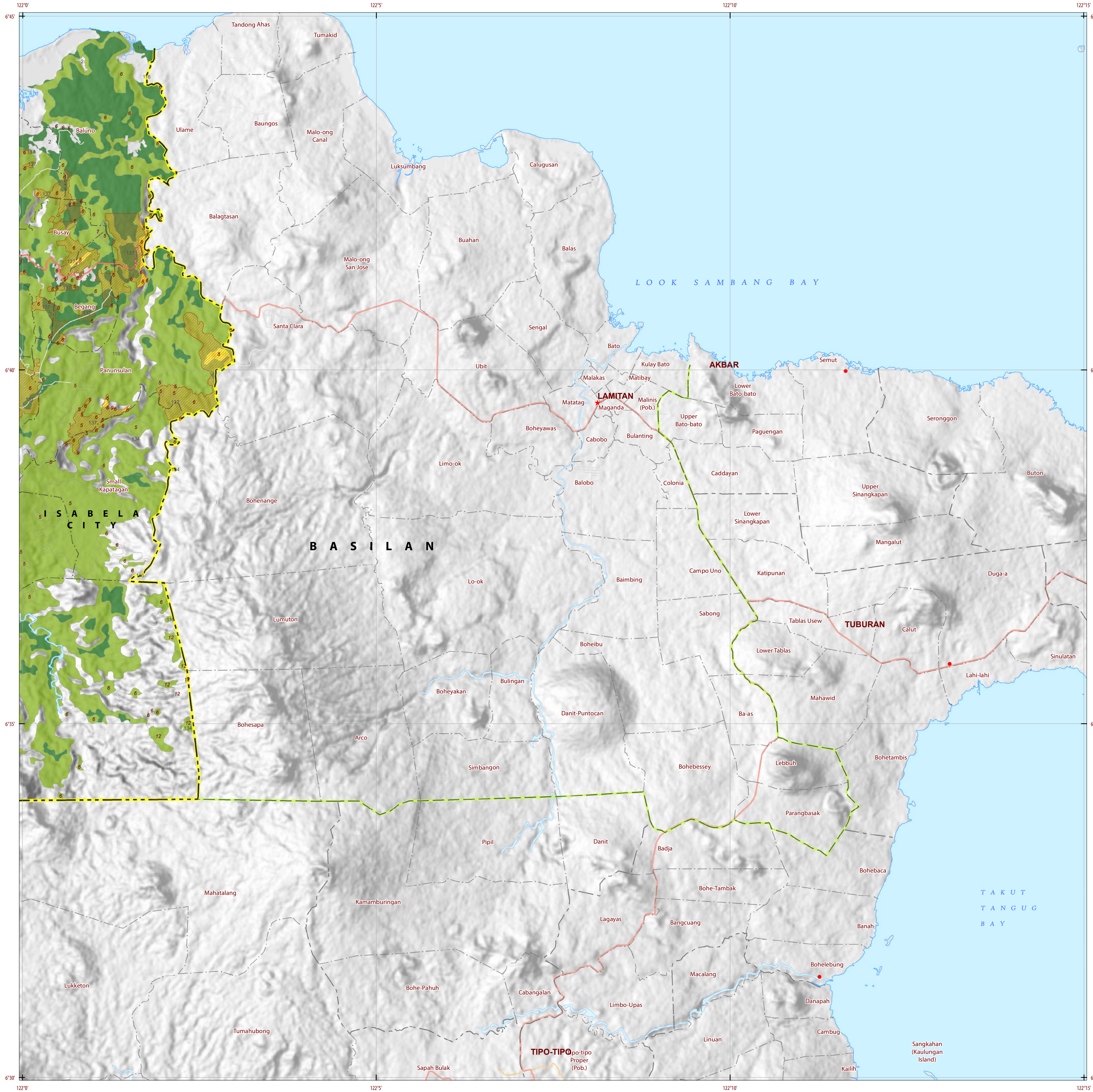
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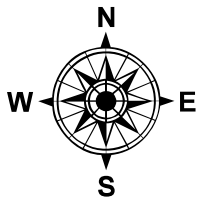
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Lamitan



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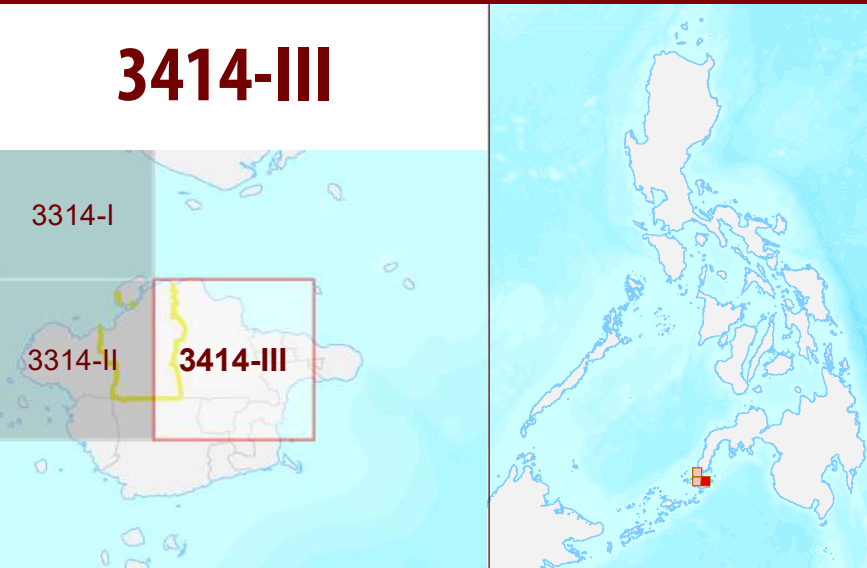
OTHER SIGNS

- NGP Areas  
Cacao  
Land limitation  
Land use

CONVENTIONAL SIGNS

- ROADS**  
Expressway  
Trunk line  
Primary  
Secondary  
Tertiary
- BOUNDARY**  
Region  
Province  
District  
Municipality  
Barangay
- HYDROLOGY**  
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Built-up  
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